

## NOTES ON THE GIANT TREES OF VICTORIA.

BY N. J. CAIRE.

(Communicated by F. G. A. Barnard.)

*(Read before the Field Naturalists' Club of Victoria, 7th Nov., 1904.)*

THE giant trees of Victoria are found in limited numbers on the Great Dividing Range and its spurs, and in the South Gippsland ranges. It need hardly be stated that, while our giant trees represent two or three distinct species, all are members of the great genus *eucalyptus*, the characteristic timber tree of the Australian continent.

In the study of a giant tree two points have to be considered—viz., girth and height. To be a giant in girth it should measure, with a tightly-drawn tape, not less than 40 feet in circumference at 5 feet from the ground, while to be regarded as a giant in height it should raise its trunk and topmost branches at least 250 feet above the soil. Few of our giant trees combine these two qualifications.

The conditions under which they grow vary very much. Thus quality of soil, amount of shelter, exposure to sunlight, and accessibility of moisture from river or creek each have their influence. Certain combinations will produce the giant in girth, while from another set of conditions will arise the giant in height, without great girth. That there are thousands of trees in our forests measuring 20 to 30 feet in girth goes without saying, probably of great age, but, wanting favourable conditions, have come to maturity more slowly, and will probably die their natural death at those dimensions, or perhaps become a prey to the borer insect, like the many thousands of white spectres still standing in our forests. Thus the giant trees of Victoria are comparatively few in number, and occur mostly in the southern portions of the State.

Unfortunately, fire has greatly reduced their numbers, even in recent years. Thus we have lost "Big Ben," the parent of the Black Spur forest, a splendid specimen of *E. amygdalina*, with a solid trunk, without a sign of decay, 57 feet in girth. Poor "Ben" was unprotected, and was caught in the great bush-fires of 1902, and killed. He probably was a sapling when the people of England were semi-barbaric. He sent his gigantic roots down into mother earth to enable him to withstand the shocks of wind and storm century after century, whilst nation after nation has risen, held its sway for a time, has conquered or been subdued.

Some guide as to the age of trees of such a size may be gathered from the fact that one was felled in order to cut a section for use as an exhibit at the Paris Exhibition of 1878. From the centre to the bark there appeared a series of rings or band-like markings,

which when counted numbered over 1,200. Supposing one of these markings to have been formed each year, then this tree was at least 1,200 years old.

Recently, in conversation with an American expert, who was employed by his Government to obtain information generally on the giant trees of America and elsewhere, I found that his idea of their age agreed with that I had formed.

In California there are some giant trees, belonging to the Sequoia family, varying from 70 to 120 feet in girth. Only about eighteen of them were now left. They are carefully protected, and are to be allowed to live their natural life until they die and decay away. Experts who have studied them have come to the conclusion that they are fully 1,800 years old. In Victoria the giant trees are regarded as so much firewood, and little is known regarding them.

Nearly all the Victorian giant trees which have come under my notice have the tops broken off, with signs of decayed timber coming down. Once decay sets in through old age, shrinkage seems to follow. We have an instance of this in "Uncle Sam" on the Blacks' Spur beyond Fernshaw. Some thirty-five years ago this tree measured 40 feet in girth at 6 feet from the ground, when I measured it some ten years ago it was only 36 feet. Its height, taken with a theodolite, was 250 feet, with a broken top, and very much decayed. My impression is that at the age of from 1,200 to 1,500 years, decay and shrinkage set in.

Let me now give some particulars of trees we have known. The first to attract public attention was a Blackbutt, *E. pilularis*, which I named "Uncle Sam," on the Black Spur, and which, in consequence of being close to the road traversed every day by Cobb and Co.'s coaches, soon became an object of public interest. This tree was 40 feet in girth and 250 feet high, with a broken top.

Another blackbutt, "Big Ben," I discovered, and also named, is situated about a mile and a half from "Uncle Sam," and measured 57 feet in girth and over 250 feet high. The tree which was felled for the purposes of the Paris Exhibition stood on a hill to the south of "Big Ben," and was christened "Billy Barlow" by the splitter who found it. The flat butt of "Billy," about 20 feet in diameter, is all that now remains to mark the place where once he stood defying the storms of centuries.

At "Tommy's Bend," about seven miles beyond Marysville, there is still to be seen the ashy shell of what was once a very big tree, supposed to have been about 60 feet in girth. A few miles beyond, at Cumberland Creek, we have the two newly discovered giants. These are situated in sheltered valleys at an altitude of about 2,600 feet. One of them, a White Manna Gum, *E. viminalis*, measures 58 feet in girth at 6 feet from the ground.

The other, a Mountain Ash, *E. stuartiana*, is 70 feet in girth at 4 feet from the ground. The height of these is only about 150 to 180 feet in each case, the top having been blown off through decay setting in. Probably if either of these were felled it would show from 1,500 to 2,000 rings in its butt, thus indicating very great age. I have been informed that in the early days finer trees than these were found in the ranges nearer Wood's Point, but no definite records seem to exist.

In the Dandenong Ranges, at Sassafras Gully, some very fine trees up to a little over 40 feet in girth existed, but all have been destroyed by fires, or by the village settlers in clearing their allotments.

Some very large trees have existed in the Warburton district, especially one, in the hollow shell of which four or five mounted horsemen could stand abreast. Following the ranges round to Gilderoy, and on to Beenak, here and there large trees were to be found. At Spicer's, Mount Myrtalia, Gilderoy, there is a hollow tree in which ten or twelve visitors can sit round a table for afternoon tea.

Beyond Beenak, along the ranges at Noojee and Neerim, many fine specimens existed. The "Neerim Giant," measured by a Government surveyor, was 48 feet in girth and 325 feet high, with the top broken off. This fine specimen has gone, like many others, through neglect, and has been reduced to ashes. About a mile from this I found a tree, since known as Barker's "Duke," which measured 40 feet in girth. Thence further along the ranges towards Mount Baw Baw other giant specimens have been known on private property, but no records have been made of them.

If we cross over to the South Gippsland Ranges we will find the same class of country, the same quality of soil, and the same conditions existing. At Yarragon, and thence across to Mirboo, some fine specimens once existed, but have now mostly been destroyed. "Hercules," at Wynstay, near Yarragon, was a monster, growing in red volcanic soil, but came to its end by fire; its hollow trunk measured nearly 30 feet in diameter. The forests here were noted for their tall trees. The tallest yet heard of was at Childers, and was felled for the local saw-mills, and many thousands of palings were split from its trunk, which was of no great girth, but measured 300 feet to the first branch, beyond which was a head of 50 feet of foliage.

Turning to the Otway Peninsula, we find "Old Joe," at Lorne—a good solid trunk, without spurs, 40 feet in girth, and over 200 feet high. Others existed at Apollo Bay, a little further south, and at Beech Forest, more to the west, but no records have been made of them, and probably, in the general destruction, they have now passed out of existence.

On the Geological Survey Quarter-sheet, 3 N.E., issued in 1865, which includes the Plenty Ranges, there is marked on the western slopes of Mount Disappointment the position of a tree having a circumference of 46 feet 8 inches at 2 feet from the ground.

From these notes it will be seen that the giant trees now existing are few and far between, and in consequence of the little interest taken in them, either by the Government or private individuals, in the course of another half-century they will have ceased to be. The constant recurrence of drought and bush fires will surely overtake the few that remain with us, and our grand and great grandchildren will only hear of the great plants whose seeds were sown in the ground probably about the commencement of the Christian era, or they may perhaps see a photograph of one handed down by those interested in them; but the great giants themselves, the parents of our forests, will have passed away, unless some interest is awakened in the meantime, and an effort made to conserve and protect some of the finest specimens.

In many cases hollow giant trees have been made use of as temporary shelters by the selectors on whose land they happened to be until more suitable structures could be erected. In some instances they have been permanently retained for use. Thus, one at Neerim was turned into a three-storied dwelling; the topmost flat was used as a bedroom, the middle flat as a sitting room, whilst the basement served as a kitchen and diningroom. At Yarra-wonga an old couple made use of a hollow Red Gum, *E. rostrata*, as a dwelling-place for more than twelve years whilst depending upon fishing for a livelihood. At Kerrisdale, in the Yea district, a hollow giant Red Gum has afforded welcome shelter to many a sundowner, or swagman, for years past. They have been utilized as storehouses, as stables for horses, bullocks, and calves, and also as pig-styes. A very large tree once existed at M'Donald's Track, South Gippsland, in which a teamster was known to stable his team of 12 bullocks. Felled across a creek from bank to bank they have been used as bridges, in one case which came under my notice saving a walk of four miles out of seven which would have been necessary had it not been for this mode of crossing. Others have been turned into look-outs, as for instance the two specimens at the Hermitage, Blacks' Spur, which are ascended by means of permanent staircases to 60 or 70 feet above the ground.

It is not improbable that in the past history of Victoria even larger trees than those mentioned have existed, but have by some means or other been destroyed. The selector, usually a rough and ready man, with but little poetry or sentiment in his otherwise sturdy character, is blind as to the origin or history of these great

plants, his one desire being to see his land cleared and grass growing for the sustenance of his stock. No doubt old age has told its tale on many of the great trees, but the firebrand has proved the more easy and expeditious method for their destruction.

Another enemy to the giant tree must also be mentioned, by which their destruction is accomplished, though in a slower way. In many of our Victorian forests vast patches of white trees can be seen, giving at a distance the impression that the hill or country in question is covered with snow. Travellers to Marysville, when descending the further side of the Blacks' Spur, can see on the eastern slopes of Mount Juliet white patches and stripes near the summits of the ridges. These are vast patches of eucalyptus trees, white as spectres, all dead without having been rung or yet bearing any sign of having been charred by fire. For a time it was conjectured that falls of snow, followed by frost, were responsible for the death of the trees. More recent opinions have ascribed the cause to the depredations of insect larvæ, most probably some species of borer beetle.

So far as I know no official investigation has been made into the question, and what has been stated is merely conjecture. In the South Gippsland mountains great strips of forest are thus made bare, and are discernible as white stripes on the hills. Many years ago I deemed this of sufficient importance to secure negatives for future reference. As far as my observations went, these dead areas ran in long narrow strips having an east and west direction. My opinion is that some cause existed sufficient to destroy the trees long before they arrived at maturity. The natural death of eucalyptus trees can be seen everywhere in our forests. All the great giant trees are far advanced in their natural course of life, all with the tops broken off, and the tumbling branches giving us positive evidence of the decay existing above. Smaller trees by the roadside afford the same evidence. We see their topmost branches wither downwards, clearly showing that the tree has no longer power to force its sap to the highest branches, and death is the natural consequence.

For years the State has maintained a Forest Department, several Chief Conservators of Forests have held office, nurseries have been established, and after all this great expenditure our efforts at forest conservation have been pronounced a failure by the press. The public has been told officially that we have no giant trees, and the cause of the destruction of thousands of great gum trees in our forests has never been investigated; in fact, the general public is entirely ignorant that such wholesale destruction of our forests is slowly, but surely, taking place.

In the very early history of Victoria reports were circulated of the existence of large trees in the mountain ranges; but that



these trees were the oldest inhabitants of the land seems never to have occurred either to public or private individual. They seem to have been regarded merely as profitable sources for the fire-wood dealers. The final touch in the matter of officially ignoring the giant trees of Victoria was given during the last International Exhibition in Melbourne, when the representative of the United States requested the Government to guide him to one of the forests, so that he might see a specimen of our giant trees. He was officially informed by one of our Executive Ministers that we had no giant trees, and therefore it was of no use to conduct him to any of the forests.

In America the existence of such trees has been made a profitable asset to the country, in being held out as an incentive to tourists to visit them. Here we have had an equally valuable asset, but for the sake of the few hundred pounds which might be necessary to clear sufficient space around the well-known ones to protect them from the ravages of bush fires, or to offer as rewards for the discovery of fresh examples, this grand asset has almost slipped away from us. Want of means can be no excuse, for nearly one million of money was spent on the Exhibition referred to—with what result!

The question arises—Is it yet possible to revive an interest in our few remaining giants? I think it would be still possible to gather much information, for purposes of record, before the few remaining giants finally pass away. If an association of persons interested were to meet periodically, and by correspondence or visits to the forests get together such information as may be procurable, it might then be published, either officially or privately. To allow this generation to pass away, and with it much of the knowledge of these giants, of whose age and history we know so little, would be a disgrace to a people priding themselves on the advanced state of their civilization. Without doubt in future years scientific men in all parts of the world, when studying the varied aspects of plant-life, will come across references to the giant trees which once existed in Victoria, and will send to our grandchildren, or may be our great grandchildren, for authentic records of the same. Finding they can get no satisfactory information, they will naturally conclude that the so-called giant trees existed only in our imagination, and originated in the early days from stories told us by the aboriginals.

Geologists might possibly be able to tell us something of the causes which have led to the production of such magnificent examples of the vegetable world. Possibly one or two facts which have come under my notice may be of help in this direction. The altitude above sea-level at which they grow has now been pretty well determined. Near the coast we find them, as a rule, at from 300 to 600 feet above sea-level, especially in the Gipps-

land mountains. As we proceed inland to the Great Dividing Range the altitude increases. Thus "Big Ben" stands at about 1,000 to 1,200 feet, while the recently-discovered giants beyond Marysville are found at about 2,600 feet. Perhaps early geological history has something to do with the question. If we travel by the Gippsland railway we go, as it were, along a great valley, between the Baw Baw mountains on the one hand and the South Gippsland mountains on the other. If we stop at Beaconsfield, at a mile from the station, on the first rise of the hill, we come to a deposit of white sand, of considerable area. Eighteen feet down and we are not at the bottom of it. Higher up the hill, towards Upper Beaconsfield, a similar formation is found. If we go to Pakenham station, seven miles further, and walk a few miles towards the Gembrook hills, we find another similar deposit of pure sand, suggesting that the ocean once washed the shores of these spurs of our Gippsland mountains; but I am unaware whether a similar formation exists on the opposite side of the valley, along the spurs of the South Gippsland ranges.

In placing the foregoing information before the Field Naturalists' Club I must be permitted to state that, while making our giant trees a favourite study, I did not do so as a botanist, as I have but a superficial knowledge of that branch of science. It is my profession as a photographer which has continually brought me into close contact with them, and, being of an inquiring and observant temperament, I have gradually been led to make a study of them. If the few facts I have now stated be the means of awakening official and public interest in them, and lead to the collecting and recording of information for the benefit of future generations, then I will consider myself well repaid in the interest that has been aroused.

---

### WILSON'S PROMONTORY AS A NATIONAL PARK.

THE proposal to reserve Wilson's Promontory as a National Park has now been before the public for a period of nearly twenty years. I can find no record as to who originated the scheme, but tradition in the Club ascribes to Mr. J. B. Gregory the credit of bringing it forward, and of long and strenuously advocating the cause. In the second volume of the *Victorian Naturalist* will be found an account of a trip made to the Promontory at Christmas, 1884. The party consisted of Mr. Gregory, Mr. A. H. S. Lucas, and Mr. Robinson. They went from the Trafalgar railway station to the lighthouse. Probably the idea of the reservation then arose in their minds. The almost complete isolation of the locality, with its dense fern gullies and occasional well-wooded hills, would